

# Transgenic mouse model for assessing efficacy of IPV

- Sabin 2 IPV
  - Less immunogenic than cIPV, incomplete protection
  - Protective against Sabin-derived strain
- Sabin 1 IPV
  - Comparable or better than cIPV
- Sabin 3 IPV
  - Less immunogenic, incomplete protection

# Cross reactivity between MEF-1 and Sabin 2 strains

Antigen-capture ELISA:		
System	Antigen titer	
	MEF-1	Sabin 2
MEF-1 ELISA	1 : 640	1 : 320
Sabin 2 ELISA	1 : 80	1 : 640

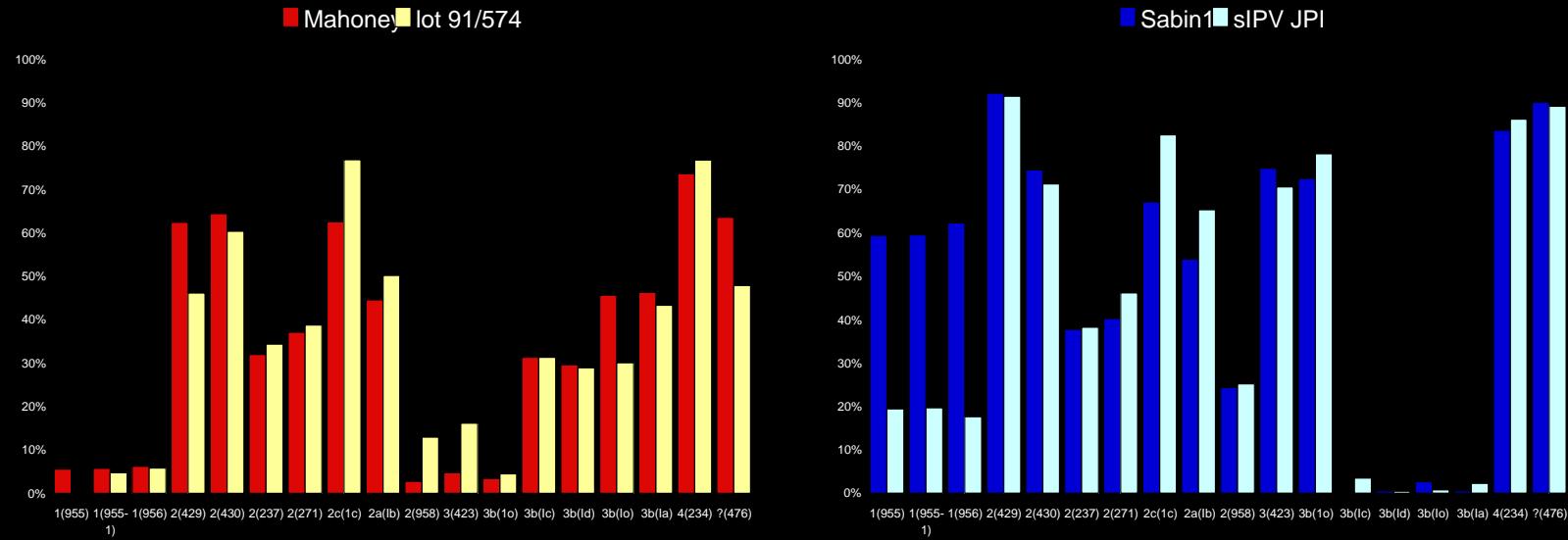
Neutralization test:		
Rabbit anti-serum	Virus*	
	MEF-1	Sabin 2
MEF-1	1 : 74,989	1 : 63,096
Sabin 2	1 : 2,371	1 : 11,220

\* 100 TCID<sub>50</sub>

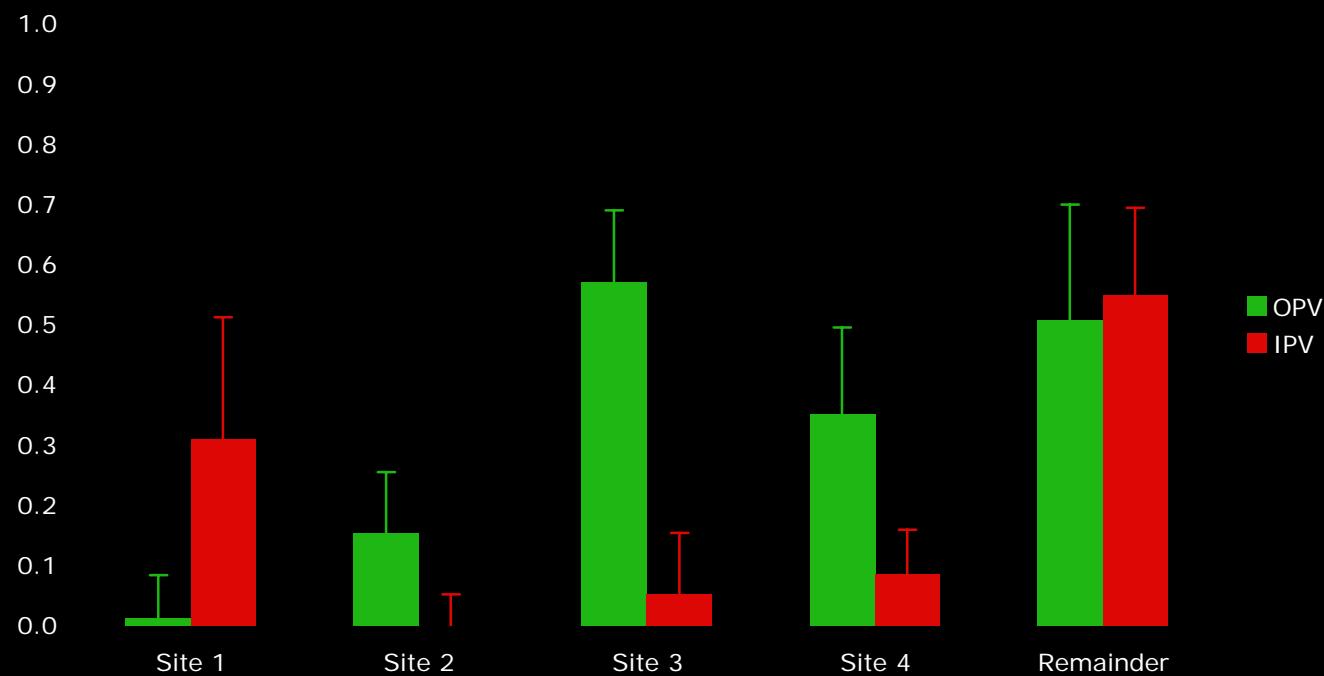
# Immunological profiles

- Epitope profiles:
  - Quantitative contribution of individual epitopes to overall immune reactivity of vaccines and live viruses
- Paratope profiles:
  - Quantitative contribution of specific paratopes to overall potency of polyclonal antisera
- Both methods can be used for vaccine comparability studies

# Epitope profiles of conventional and Sabin IPV



# Paratope profiles of immune response to OPV-1 and cIPV-1

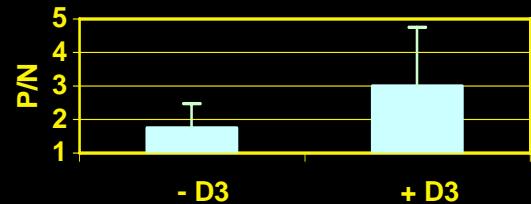


Can adjuvants boost mucosal  
immune response?

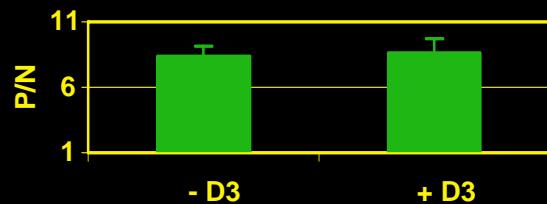
1,25 (OH)<sub>2</sub> Vitamin D3

# Effect of 1,25-(OH)<sub>2</sub>-Vitamin D3

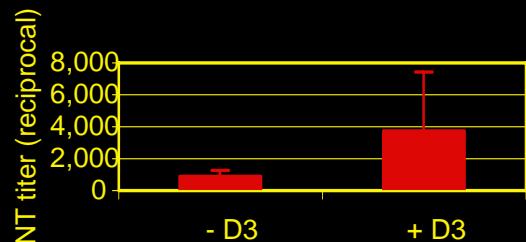
Type 1: IgA in se



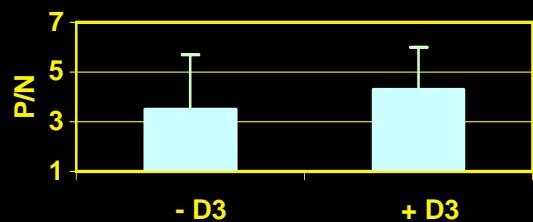
Type 1: IgG in se



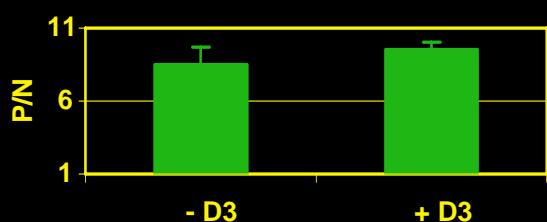
Type 1: NT c



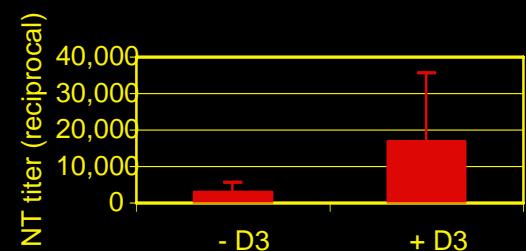
Type 2: IgA in se



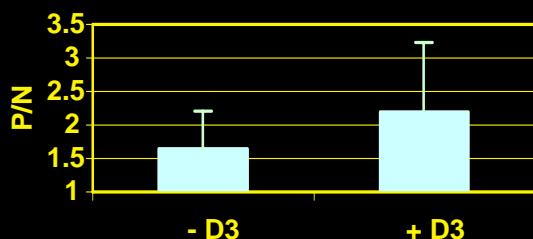
Type 2: IgG in se



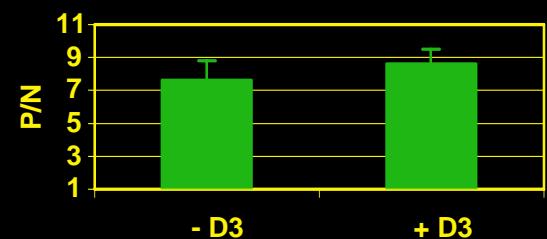
Type 2: NT c



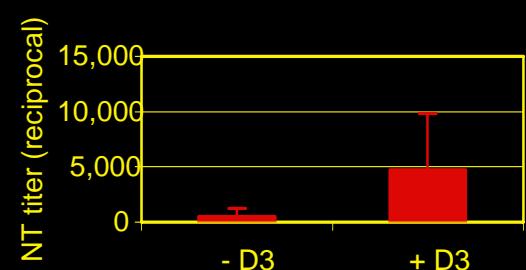
Type 3: IgA in se



Type 3: IgG in se



Type 3: NT c



# Intradermal vs. Subcutaneous inoculation

